

February 11, 1986

TO: File

FROM: Kathryn M. Mutz, Reclamation Biologist *Kmm*

RE: St. George Mining Corporation, Apex Mine, ACT/053/004,
Washington County, Utah

On February 7, 1986, Everett Hooper, Thomas Munson, James R. Fricke and Kathryn M. Mutz visited the Apex Mine in Washington County. After Thomas Munson checked in at the mill office, the mine manager and principal engineer, described the history of the operation, current activities and future plans and gave us a walking tour underground. The old copper mine has been converted to the only galium and germanium mine in the world. Silver, zinc, copper and lead will also be separated out in the milling process.

The deposit is highly weathered creating unusual mining conditions which require special equipment to exploit small development drifts. These drifts are located off of an access tunnel which spirals around the main shaft of the old copper works. During production, the drifts are sprayed with gunnite with metal particles to prevent collapse. After a drift has been exploited, it is filled with cement. Gravel made from mine waste and mixed with portland cement is pneumatically injected into the drift with a small amount of water added at the last minute. The cement filled drifts will provide more stable roof conditions for deeper workings.

To date, ore for the mill has consisted of the waste material from the old copper operation. A large waste pile on the hillside below the old adit has been moved to the mill site and partially processed. The manager indicated that they may try to clean additional ore from the hillside. Waste rock was also removed from a natural cavity disposal area of the old mine.

Surface features not present at the last Division inspection include a crusher unit and stockpile, the gravel and cement hoppers and a dry. The road to the mine site has been substantially improved. A new culvert may have been installed. The old bone yard has additional garbage (including a pile of mine timbers).

kmm
cc: A Team
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